

DETAILED ACTION

The indicated allowability of claims 3 - 9 is withdrawn in view of the newly discovered reference to Sinclair. Rejections based on the newly cited reference follow.

The proposed Amendment to claims 1 and 3, received 09/15/2008 is not sufficient to put application in condition for Allowance.

Specification

The disclosure is objected to because of the following:

1) phrases on page 2, lines 12 – 16, which first state: “The biasing member is in a relaxed condition when the pressure contacting end portions of the contact members are out of pressure engagement with the electrical devices.” And the next one needs some clarification: “Thereby, one of the contact members can be retracted substantially into the through hole to thereby reduce the distance between distal ends of the pressure contacting end portions of the contact members.” Can it be retracted under some pressure or under what conditions? Also, “retract” usually implies a force to *pull* something back in; the present device the contacts are *pushed*.

2) on page 5, lines 3 – 7, “By installing the coil spring in a relaxed or non-compressed condition, and with the first contact member retracted within the sleeve, the distance between the extreme distal ends of outer pressure contacting end portions 32a and 34a of the contact members is reduced.” The distance reduces compared with what?

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

Claim Objections

Claims 1 and 2 are objected to because of the following informalities:

Claim 1 recites the limitation "the housing" in line 16. Should "housing" be change to - sleeve- -? Otherwise, there is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the restricted stops" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, the phrase: "... whereby one of the contact members can be retracted substantially into the through hole to thereby reduce the distance between distal ends of the pressure contacting end portions of the contact members" is confusing. Reducing requires a comparison. What is this distance reduced in comparison to?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Sinclair (6937045).

In regard to claim 1, Applicant's Admitted Prior Art discloses an electrical terminal 10, comprising: a first contact member 20 having an outer pressure contacting end portion 20a for pressure engaging a first electrical device (not shown) and an enlarged inner end portion 20b; a second contact member 20 having an outer pressure contacting end portion 20a for pressure engaging a second electrical device (not shown) and an enlarged inner end portion 20b; a sleeve 12/14 including a through hole (not marked) for slidably receiving the inner end portions 20b of the first and second contact members 20, the through hole having a first open end 18 through which the pressure contacting end portion 20a of the first contact member 20 projects and a second open end 18 through which the pressure contacting end portion 20a of the second contact member 20 projects, and restricted stop means (not marked, flanges near 18) at the first and second open ends of the through hole for abutting the enlarged inner end portions 20b of the contact members 20 to define outer limit positions of the pressure contacting end portions 20a of the contact members 20; and

a biasing member 22 in the through hole of the sleeve 12/14 to resiliently bias the contact members 20 in opposite directions.

Applicant's Admitted Prior Art does not disclose that the biasing member 22 is in a relaxed condition when the pressure contacting end portions of the contact members are out of pressure engagement with the electrical devices. However, Sinclair teaches biasing member 50 being in a relaxed condition (FIG. 7, a view showing the electrical contact probe in its initial rest position), when the pressure contacting end portions of the contact members are out of pressure engagement with the electrical devices (PCB 12 and 14), whereby one of the contact members 40 can be "retracted" substantially into the through hole 20 to thereby reduce the distance between distal ends (not marked) of the pressure contacting end portions of the contact members. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the arrangement of Sinclair in the structure of Applicant's Admitted Prior Art in order to reduce size of terminal socket in initial position.

In regard to claim 2, Applicant's Admitted Prior Art discloses that restricted stops comprise inwardly turned flanges of the sleeve 12/14 at the first and second open ends thereof (see Fig.1).

In regard to claim 3, Applicant's Admitted Prior Art discloses an electrical terminal 10, comprising:

a first contact member 20 (top in Fig.1) having an outer pressure contacting end portion 20a for pressure engaging a first electrical device (not shown) and an enlarged inner end portion 20b;

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a second contact member 20 (bottom) having an outer pressure contacting end portion 20a for pressure engaging a second electrical device and an enlarged inner end portion 20b;

a sleeve 12, 14 including: a through hole for slidably receiving the inner end portions of the first and second contact members, the through hole 16 having a first open end (near numeral 18) through which the pressure contacting end portion 20a of the first contact member projects and a second open end through which the pressure contacting end portion of the second contact member projects, and restricted stop means 18 at the first and second open ends of the through hole 16 for abutting the enlarged inner end portions 20b of the contact members 20 to define outer limit positions of the pressure contacting end portions 20a of the contact members,

wherein the sleeve includes an inner tube 14 surrounded by an outer tube 12, with the contact members 20 being reciprocally slidably mounted in opposite ends of the inner tube 14, and

a biasing member 22 in the through hole of the sleeve/housing to resiliently bias the contact members 20 in opposite directions.

Applicant's Admitted Prior Art does not disclose that the biasing member 22 is in a relaxed condition when the pressure contacting end portions of the contact members are out of pressure engagement with the electrical devices. However, Sinclair teaches biasing member 50 being in a relaxed condition (FIG. 7) when the pressure contacting end portions of the contact members are out of pressure engagement with the electrical devices (PCB 12 and 14), whereby one of the contact members 40 can be

“retracted” substantially into the through hole to thereby reduce the distance between distal ends (not marked) of the pressure contacting end portions of the contact members. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the arrangement of Sinclair in the structure of Applicant’s Admitted Prior Art in order to reduce the size in an initial position.

In regard to claim 4, Applicant’s Admitted Prior Art discloses the inner tube 12 is fabricated of conductive material and the outer tube 14 is fabricated of dielectric material.

In regard to claim 5, Applicant’s Admitted Prior Art discloses the restricted stop means 18 at one open end of the sleeve is formed by an inwardly turned flange of the outer tube 12.

In regard to claim 10, Applicant’s Admitted Prior Art discloses that the biasing member 22 comprises a coil spring having opposite ends engageable with the enlarged inner end portions 20b of the contact members 20.

Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (7315176) in view of Sinclair (6937045).

In regard to claim 1, Nelson et al. disclose an electrical terminal 100, comprising: a first contact member 120 having an outer pressure contacting end portion 124 for pressure engaging a first electrical device (not shown) and an enlarged inner end portion 122; a second contact member 120 having an outer pressure contacting end portion 124 for pressure engaging a second electrical device (not shown) and an enlarged inner end portion 124; a sleeve 12 including a through hole (not marked) for

slidably receiving the inner end portions 122 of the first and second contact members 120, the through hole having a first open end (area 114) through which the pressure contacting end portion 124 of the first contact member 120 projects and a second open end (area 114) through which the pressure contacting end portion 124 of the second contact member 120 projects, and restricted stop means 112a and 112b at the first and second open ends of the through hole for abutting the enlarged inner end portions 122 of the contact members 120 to define outer limit positions of the pressure contacting end portions of the contact members; and
a biasing member 130 in the through hole of the sleeve 12 to resiliently bias the contact members 120 in opposite directions.

Nelson et al. does not disclose that the biasing member 130 is in a relaxed condition when the pressure contacting end portions of the contact members are out of pressure engagement with the electrical devices, whereby one of the contact members 120 can be “retracted” substantially into the through hole to thereby reduce the distance between distal ends of the pressure contacting end portions of the contact members. However, Sinclair teaches biasing member 50 being in a relaxed condition (FIG. 7), when the pressure contacting end portions of the contact members are out of pressure engagement with the electrical devices (PCB 12 and 14, see Fig.4), whereby one of the contact members 54/ 48 can be “retracted” substantially into the through hole to thereby reduce the distance between distal ends (not marked) of the pressure contacting end portions of the contact members. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use

the arrangement of Sinclair in the structure of Applicant's Admitted Prior Art in order to reduce size of the terminal socket in an initial position.

In regard to claim 11, Nelson et al. disclose that the outer pressure contacting end portion 124 of one of the contact members 120 (left in Fig.1D) is shorter than the outer pressure contacting end portion of the other contact member.

Claims 6 - 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art and Sinclair, as applied to claim 3 above, and further in view of Coe et al. (4659987).

In regard to claim 6, Applicant's Admitted Prior Art discloses most of the invention except for the restricted stop means at one open end of the sleeve being formed by an inwardly turned flange of the inner tube. However, Coe et al. teach the restricted stop means at one open end of the sleeve 105 is formed by an inwardly turned flange (not marked) of the inner tube (not marked, see Fig.8). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify inner tube of Applicant's Admitted Prior Art by including inwardly turned flanges, as taught by Coe et al., in order to increase security of the engagement between contact and tubes.

In regard to claim 7, Applicant's Admitted Prior Art discloses the restricted stop means 18 at an opposite open end of the sleeve 12, 14 is formed by an inwardly turned flange of the outer tube 12.

In regard to claim 8, Applicant's Admitted Prior Art modified by Coe et al. discloses opposite ends of the inner tube abut against the flanges (see Fig. 8).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art and Sinclair (6937045), as applied to claim 3 above, and further in view of Klostermann (2724096).

In regard to claim 9, Applicant's Admitted Prior Art discloses most of the invention except for the outer tube of the sleeve includes a positioning recess in an outer surface thereof for positioning the electrical terminal in an appropriate housing. However, Klostermann teaches a positioning recess (not marked, a portion between numerals 16 in Fig.1) in an outer surface of sleeve 15 for positioning the electrical terminal in an appropriate housing 10. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify outer surface of the outer tube in Applicant's Admitted Prior Art by including a positioning recess, as taught by Klostermann, and for the same reason.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cullen et al. (5,417,595) show inner (with stopping flanges) and outer tubes.

Boyle et al. (6,652,326) show inner (with stopping flanges) and outer tubes, and a positioning recess in outer surface of the sleeve (see Fig. 8).

Long et al. (4200351) show one contact member is greater than another.

Kasama (5,990,697) shows a greater contact portion 6, stop portions and no sleeve.

Chun-Fu shows a sleeve with stopping flanges (Fig. 8).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LARISA Z. TSUKERMAN whose telephone number is (571)272-2015. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee S Luebke can be reached on (571)-272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LT, 10/06/2008

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